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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,571	10/08/2004	Takaaki Matsuda	02610.0042	9018
22852	7590	11/16/2007	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			RABAGO, ROBERTO	
			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	DELIVERY MODE
			11/16/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/510,571

Applicant(s)

MATSUDA ET AL.

Examiner

Roberto Rábago

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 5,9 and 11-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 1 is objected to because the text defines a parameter R<sup>4</sup>, yet this feature cannot be found in any of the recited structures.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim~~s~~ 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Toyoizumi et al. (US 20030100683).

The reference discloses in Example 15 a 99% hydrogenated polybutadiene (Mw=136,000) modified with N,N-bis(trimethylsilyl)aminopropyltrimethoxysilane, which would be expected to result in at least one functionality corresponding to claimed structure (c).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyoizumi et al. (US 20030100683).

The reference discloses in Example 15 a 99% hydrogenated polybutadiene (Mw=136,000) modified with N,N-bis(trimethylsilyl)aminopropyltrimethoxysilane, which would be expected to result in at least one functionality corresponding to claimed structure (c). Although unexemplified, most of the alkoxysilanes disclosed in [0110] would be expected to result in at least one of the claimed structure (k) of claim 1. Regarding claim 3, use of many of the trialkoxysilyl amine modifiers disclosed at [0103] through [0109] would be expected to result in at least one of the claimed structure (V) when F<sup>1</sup> is (h-1). One of ordinary skill in the art would be motivated to include such modifiers in polymers and methods analogous to those of the working examples because they have been suggested by patentee.

6. Claims 4, 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyoizumi et al. (US 20030100683).

The reference discloses in Example 15 a 99% hydrogenated polybutadiene (Mw=136,000) modified with N,N-bis(trimethylsilyl)aminopropyltrimethoxysilane, which would be expected to result in at least one functionality corresponding to claimed structure (c). Missing from the examples are the use of a filler, a blending resin or rubber, and a crosslinking step. However, one of ordinary skill in the art would be motivated to include such features in polymers and methods analogous to those of the working examples because they have been suggested by patentee. Fillers and adjuvant polymers and rubbers are recommended at [0057], [0135], [00138], [0144], and crosslinking/vulcanizing agents (clearly for the purpose of conducting a crosslinking/vulcanizing step) are disclosed in [0147].

7. Claims 5, 9 and 11-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

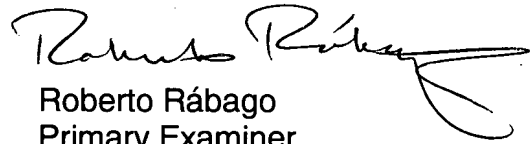
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rábago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Roberto Rábago  
Primary Examiner  
Art Unit 1796

RR  
November 13, 2007